

## CLAIMS:

1. A method of monitoring the operation of at least one microcontroller unit (300) that is intended for at least one application and is associated with a system (100), characterized in that
  - the microcontroller unit (300) has at least one non-volatile memory area (10) associated with it,
  - the memory area (10) can be read from and/or written to by the microcontroller unit (300), and
  - at least one set of statistics, and in particular a set of fault statistics, relating to the operation of the microcontroller unit (300), can be kept by means of the memory area (10).
2. A method as claimed in claim 1, characterized in that the memory area (10) is permanently supplied by at least one battery unit (400).
3. A method as claimed in claim 1 or 2, characterized in that,
  - in relation to the operation of the microcontroller unit (300), a distinction can be made between different reset events and in that
  - these different reset events can be made accessible to the microcontroller unit (300).
4. A method as claimed in any of claims 1 to 3, characterized in that the memory area (10)
  - can be read from at any time and/or
  - can be written to only after a reset or while the system (100) is restarting.
5. A base chip (200), and particularly a system base chip, for monitoring the operation of at least one microcontroller unit (300) that is intended for at least one application, characterized by at least one non-volatile memory area (10) that can be read from and/or written to by the microcontroller unit (300), and by means of which at least one set of

statistics, and particularly at least one set of fault statistics, can be produced relating to the operation of the microcontroller unit (300).

5 6. A base chip as claimed in claim 5, characterized by  
- at least one information unit (20) that is provided to allow for different reset events,  
- at least one reset unit (40) for resetting the microcontroller unit (300), which reset unit (40) is connected (42) to the microcontroller unit (300), and  
10 - at least one supply unit (50) that is connected (52) to the microcontroller unit (300).

7. A base chip as claimed in claim 6, characterized in that  
- the memory area (10) and the supply unit (50) are permanently associated with at least one battery unit (400), and in that  
15 - the microcontroller unit (300) has at least one temporary energy supply associated with it via the supply unit (50).

8. A base chip as claimed in any of claims 5 to 7, characterized in that the memory area (10) and/or the information unit (20) have inserted in front of them at least one  
20 interface unit (30) for the exchange of data with the microcontroller unit (300).

9. A system (100), and particularly a control system, characterized by at least one microcontroller unit (300) intended for at least one application and by at least one base chip (200) as claimed in any of claims 5 to 8.

25 10. Use of a method as claimed in any of claims 1 to 4 and/or of at least one base chip (200) as claimed in any of claims 5 to 8 for monitoring the operation of at least one microcontroller unit (300) intended for at least one application, in automobile electronics and in particular in the electronics of motor vehicles.